

Physics	Group-I	
Time: 15 Minutes	(Objective Type)	Max. Marks: 12

**Note:** Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question.

**1-1- The index of refraction depends on:**

- (a) The focal length      (b) The speed of light ✓
- (c) The image distance    (d) The object distance

**2- Five joules of work is needed to shift 10C of charge from one place to another. The potential difference between the places is:**

- (a) 0.5 V ✓      (b) 2 V
- (c) 5 V      (d) 10 V

**3- Capacitance is defined as:**

- (a)  $VC$       (b)  $\frac{Q}{V}$  ✓
- (c)  $QV$       (d)  $\frac{V}{Q}$

**4- What happens to the intensity or the brightness of lamps connected in series as more and more lamps are added:**

- (a) Increases      (b) Decreases ✓
- (c) Remains the same    (d) Cannot be predicted

**5- Which is an example of a longitudinal wave:**

- (a) Sound wave ✓    (b) Light wave
- (c) Radio wave    (d) Water wave

- 6- The presence of a magnetic field can be detected by a:
- (a) Small mass
  - (b) Stationary positive charge
  - (c) Stationary negative charge
  - (d) Magnetic compass ✓
- 7- In vacuum all electromagnetic waves have the same:
- (a) Speed ✓
  - (b) Frequency
  - (c) Amplitude
  - (d) Wavelength
- 8- Safe limit of radiation exposure in one year is:
- (a) 4 rem
  - (b) 5 rem ✓
  - (c) 3 rem
  - (d) 6 rem
- 9- The relation between velocity, frequency and wavelength of a wave is:
- (a)  $v f = \lambda$
  - (b)  $f \lambda = v$  ✓
  - (c)  $v \lambda = f$
  - (d)  $v = \frac{\lambda}{f}$
- 10- From which of the following you can get information almost about everything:
- (a) Book
  - (b) Teacher
  - (c) Computer
  - (d) Internet ✓
- 11- The cathode ray oscilloscope consists of main parts:
- (a) Two
  - (b) Three ✓
  - (c) Four
  - (d) Five
- 12- In computer terminology, information means:
- (a) Any data
  - (b) Raw data
  - (c) Processed data ✓
  - (d) Large data